REMARKS

Claims 1-4, 6, and 16-19 are pending after the entry of this amendment. Claims 5 and 7-15 are cancelled.

Claims 2-4, 6, and 16-17 are dependent directly from independent claim 1. Claim 19 is dependent directly from independent claim 18.

Claims 1, 2, and 4 are currently amended. Support for amendments can be found throughout the as-filed application, including in the specification at page 7, starting on line 22, through page 10, line 19, and FIG. 2.

Claims 16-19 are new. Support for the new claims can be found throughout the as-filed application, including in the specification at page 7, starting on line 22, through page 10, line 19, and FIG. 2. Furthermore, support can be found in the original claims.

I. FORMAL MATTERS

A. Drawings

Applicants note with appreciation that examiner has accepted drawings filed on November 27, 200.

II. Rejections under 35 USC §112

Claims 1-7 and 12-13 are rejected under 35 USC §112, first paragraph as failing to comply with the written description requirement. Applicants believe that this rejection is moot in light of the amendment to claim 1 and the above-mentioned support for the amendment. Accordingly, applicants respectfully request reconsideration of this rejection.

III. Rejections under 35 USC §103(a)

Claim 1 is rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 7,111,005 to Wessman ("Wessman") in view of "An Introduction to Database Systems" to Date ("Date"). This rejection is traversed at least because amended claim 1 recites "associating an index value with each character in the first character string; defining an initial value; creating a second character string formed by replacing each character in the first character string with the character's associated index value; replacing each index value in the second character string with a result obtained from adding adjacent index values pairwise from the left to the right using the initial value when adding the leftmost character, [and] encrypting the second character string wherein each character in the second character string is a valid member of the identified data type associated with the data element."

On page 6, paragraph 8 of the Action, Examiner states that Wessman, Date, and "Applied Cryptography" by Schneier ("Schneier") do not disclose "adding adjacent index values pairwise from the left to the right using the initial value when adding the leftmost character" as recited in claim 1. However, Examiner remarks that it would have been obvious to one of ordinary skill in the art to modify the combined method of Wessman, Date, and cipher block chaining (CBC) mode described in section 9.3 of Schneier to include the step of adding adjacent index values pairwise from the left to the right. Applicants disagree.

Examiner states that the motivation to modify Schneier is that in Schneier the ciphertext block is dependent not just on the plaintext block that generated it but on all the previous plaintext blocks. However, based on this statement, applicants assert that Examiner has failed to recite a plausible motivation for modifying Schneier and request that more information be provided.

In Schneier, plaintext is XORed with a previosly encrypted block and then encrypted. The result of this operation is then XORed with the next plaintext block to encrypt. Thus, in Schneier, the ciphertext block is dependent on all the previous plaintext blocks. In claim 1, the index values are associated with each of the

characters. The index values are then added to adjacent index values to arrive at a new index value. The new value is then encrypted and stored in the database. Unlike in Schneier, the new index value is not dependent on previously encrypted blocks, but instead only on index values associated with the character to the left of the current character. Furthermore, the index values are added, not XORed. Thus, one of ordinary skill in the art would not have been motivated to modify Schneier to "adding adjacent index values pairwise from the left to the right using the initial value when adding the leftmost character" as recited in claim 1. In fact, Schneier teaches away from claim 1 by describing an encryption mode in which all previous encryption operations affect a current operation, and in which the blocks are XORed.

Furthermore, Morar and Marshall, either alone or in combination, fail to teach or suggest at least "adding adjacent index values pairwise from the left to the right using the initial value when adding the leftmost character" as recited in claim 1.

Therefore, a prima face case of obvious under 35 USC §103(a) has not been established and applicants submit that claim 1 is patentable. Furthermore, because claim 18 also recites "adding adjacent index values pairwise from the left to the right using the initial value when adding the leftmost character", claim 18 is patentable for at least the same reasons.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

Dated: October 19, 2007

Respectfully submitted,

By _____
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